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10/632,484	08/01/2003	Rajkumar Jalan	M-15185 US	2999
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MACPHERSON KWOK CHEN & HEID LLP			LIN, WEN TAI	
2033 GATEWAY PLACE			ART UNIT	PAPER NUMBER
SUITE 400			2454	
SAN JOSE, CA 95110				
MAIL DATE		DELIVERY MODE		
12/15/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/632,484	<b>Applicant(s)</b> JALAN ET AL.
	<b>Examiner</b> Wen-Tai Lin	<b>Art Unit</b> 2454

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 October 2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-5,7,9-17,21-23,25-41,43-51 and 53-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1, 5, 7, 9-17, 21, 23, 25-34, 36-41, 43-44, 46-51 and 53-55, 57-62 is/are rejected.
- 7) Claim(s) 6,22,35,45 and 56 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-646)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No./Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No./Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1, 5-7, 9-17, 21-23, 25-41, 43-51 and 53-62 are presented for examination.

Claims 42, 52, and 63 have been withdrawn.

2. The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

***Claim Rejections - 35 USC § 102***

3. Claims 1, 5, 13-17, 21, 29-34, 41, 43-44, 51, 53-55 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Wiget et al.[U.S. Pat. 6640251].

4. As to claim 1, Wiget teaches the invention as claimed including: a method for providing, in a service provider's network, a multicast capability for a customer packet of a virtual private LAN service [e.g., Abstract; col.3, lines 29-39; Figs. 1a and 1b], comprising: assigning the virtual private LAN service an Internet Protocol (IP) multicast group address in a private domain of the service provider's network [e.g., col.4, lines 17-25 and 48-50]; at a provider edge device [e.g., a configured IP VPN interface; 13-16, Fig.1a; col.2, lines 65-67] associated with the virtual private LAN service [e.g., col.4, lines 50-56], encapsulating the customer packet of the virtual private LAN service in an IP packet designating the IP multicast group address [e.g., Figs. 2a and 2b] and including an Ethernet header designating a

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multicast Ethernet address associated with the IP multicast group address [e.g., Figs. 3 and 5; col. 5, lines 39-56; note that the ARP request, which contains an Ethernet header (see Fig. 3) is encapsulated within the packet containing the IP multicast address];

transmitting the IP packet over the service provider's network an IP multicast routing protocol from the provider edge device to a plurality of other provider edge devices associated with the virtual private LAN service [e.g., col.5, lines 24-32]; and

at each of the other provider edge devices associated with the virtual private LAN service, upon receiving the IP packet, recovering the customer packet [e.g., col.5, lines 57-65].

5. As to claim 5, Wiget further teaches that the Internet Protocol multicast group address associated with the virtual private LAN service is selected from a range set aside by the service provider for use with virtual private LAN services [e.g., col.3, lines 1-4; col.4, lines 16-17, wherein "each VPLS has a provider wide unique IP multicast address assigned" means that the IP multicast is uniquely allocated from the provider address space (PA)].

6. As to claim 13, Wiget further teaches that the service provider provides the virtual private LAN service in the context of a Layer 2 virtual private network [e.g., col. 3, lines 10-15].

7. As to claim 14, Wiget teaches that the method further comprises receiving the customer packet at the provider edge device originating from a customer edge device of a virtual LAN [e.g., Figs. 1a and 1b and Figs. 4-5].

8. As to claims 15-16, Wiget teaches that the method further comprises accepting into the service provider's network an IP packet for the virtual private LAN service only from the provider edge devices associated with the virtual private LAN service, and at each of the other provider edge device, forwarding the customer packet to a customer edge device of a virtual LAN. [13-16, Fig. 1a; col.3, lines 41-47; col.2, lines 65-67].

9. As to claims 17, 21, 29-34, 41, 43-44, 51, 53-55 and 62, since the features of these claims can also be found in claims 1, 5 and 13-16, they are rejected for the same reasons set forth in the rejection of claims 1, 5, 9-11 and 13-16 above.

Claim Rejections - 35 USC § 103

10. Claims 7, 12, 23, 28, 36, 40, 46, 50, 57 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiget et al.(hereafter "Wiget")[U.S. Pat. 6640251], as applied to claims 1, 5-6, 13-17, 21-22, 29-35, 41, 43-45, 51, 53-56 and 62 above, further in view of Lee [U.S. PGPub 20040165600].

11. As to claim 7, Wiget does not specifically teach that the method further comprises distributing the Internet Protocol multicast group address using a name server.

However, in the same field of endeavor, Lee teaches using a domain name server (DNS) to obtain remote site addresses.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Lee's teaching in Wiget's system because DNS already exists in the Internet world and it would be efficient to add the IP multicast group addresses search as part of the globally available DNS service.

12. As to claim 12, Lee teaches that the method further comprises providing the virtual private LAN service in the service provider's network using an Internet Protocol/Multi-protocol label switching service [e.g., paragraph 15 and claim 4].

13. As to claims 23, 28, 36, 40, 46, 50, 57 and 61, since the features of these claims can also be found in claims 1, 7, 12, 17, 33, 43 and 53, they are rejected for the same reasons set forth in the rejection of claims 1, 7, 12, 17, 33, 43 and 53 above.

14. Claims 9-11, 25-27, 37-39, 47-49 and 58-60 are rejected under U.S.C. 103(a) as being unpatentable over Wiget [U.S. Pat. 6640251], further in view of Ballardie [RFC 2201, September 1997].

15. As to claims 9-11, 25-27, 37-39, 47-49 and 58-60, Wiget is silent about applying IP multicast routing protocols such as source-based routing protocol and core-based routing protocol, which create distribution tree for distributing the IP encapsulated customer packet for the virtual private LAN service.

However, Ballardie discloses the nature and the applicability of both the source-based and core-based routing protocols, which create shared trees in a network environment [see sections 3-4]. Ballardie further teaches that the source-based routing protocol is suitable for densely populated receiving nodes such as a local area network, while the core-based routing protocol is more suitable for sparsely populated receiving nodes such as wide-area network and the Internet.

It would have been obvious to one of ordinary skill in the art that both the source-based and core-based routing protocols can be applied in Wiget's system because Wiget's virtual private LAN segments (VPLS) comprises both densely populated LAN segments and sparsely populated virtual private networks across a wide-area network such as the Internet [e.g., col. 1, line 40 – col. 2, line 14].

16. Claims 6, 22, 35, 45 and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

17. Applicant's arguments with respect to the currently rejected claims on 10/30/08 have been considered but are moot in view of the new grounds (or now reasoning) of rejection.

### ***Conclusion***

**Examiner note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations

are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The examiner can normally be reached on Monday-Friday(8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone numbers for the organization where this application or proceeding is assigned are as follows:

(571) 273-8300 for official communications; and

(571) 273-3969 for status inquires/draft communication.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Wen-Tai Lin

December 11, 2008

/Wen-Tai Lin/

Primary Examiner, Art Unit 2454